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EXAMINER

DONADO, FRANK E

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

Art Unit Location

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7-11, 13-17, 23-28 and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Nevo, et al (**WO 00/04729**). From now on, Nevo, et al, will be referred to as Nevo.

Regarding claim 1, Nevo teaches a method for synchronizing measurements in a mobile communication apparatus having a first active radio access means adapted to communicate according to a first radio access technology (RAT) (**The mobile station (MS) communicates with an active TDMA/GSM base station before handover takes place, pg. 4, lines 30-32**) and a second passive radio access means adapted to communicate according to a second RAT (**The mobile station communicates with an**

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active TDMA/GSM base station before a handover to the passive CDMA base station takes place, pg. 4, lines 30-32), comprising generation of a time reference common to the first and second radio access means (During the handover, the MS synchronizes from a TDMA/GSM base station to a CDMA base station format by using time of day as a common time reference for synchronizing between both types of base stations, where the MS is handed over from a TDMA/GSM base station to a CDMA base station, the MS receives time of day from the TDMA/GSM base station during which time the CDMA base station is synchronized to a real time of day, this time of the CDMA base station, before the handover takes place, pg. 4, lines 1-4 and 30-33 and pg. 5, lines 1-2 and 7-8), obtaining at least one time schedule where time schedule indicates a time gap during which the second radio access means is allowed to be active and determines an activation time of the time schedule based on the common time reference (The applicant defines the time schedule as the time gap, which is an interrupt, during which the second radio access means is allowed to be active. Nevo teaches transmission of the 1st base station may be interrupted while it synchronizes to the 2nd base station, pg. 4, lines 23-29).

Regarding claim 2, Nevo teaches the method according to claim 1, wherein when activation of the time schedule is requested **(The applicant defines the time schedule as the time gap, which is an interrupt. Nevo teaches a scheduled time of 20 ms during which a 1st base station is interrupted to allow time for synchronization over to the 2nd base station, pg. 4, lines 23-29), the request**

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initiates a common time event (CTE) **(The interrupt is the common time event, and transmission of a 1st base station may be interrupted while synchronization occurs with the 2nd base station, pg. 4, lines 23-29)**, in response to which the time reference is generated in the first and the second radio access means **(The MS requests a handover and this activates a time schedule. This causes an interruption to occur to allow the switch from TDMA/GSM base station to CDMA base station, during which the time of day is received in the TDMA/GSM base station and then synchronized to the CDMA base station, pg. 4, lines 1-4 and 30-33 and pg. 5, lines 1-2 and 7-8).**

Regarding claim 3, Nevo teaches the method according to claim 2, wherein the CTE is hardware supported interrupt **(In switching from a CDMA base station to a TDMA/GSM base station, the MS, a hardware component, is at first in communication with the CDMA base station and sends a type of signal indicating a need for a handover that causes the interruption to occur, pg. 4, lines 18-25).**

Regarding claim 7, Nevo teaches the method according to claim 1, wherein the time schedule is obtained based on information received from a first communication network to which the first radio access means is coupled **(In switching from a CDMA base station to a TDMA/GSM base station, the MS is at first in communication with the CDMA base station, and the CDMA base station sends this signal**

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indicating the need for handover to the MS, causing the interruption to occur so that the MS may perform a neighbor scan, pg. 4, lines 18-25).

Regarding claim 8, Nevo teaches the method according to claim 7, wherein the received information comprises configuration data specifying gaps in which the second radio access means is allowed to be active **(A time gap of 20 ms is defined to be the interruption time during which handover should occur, pg. 4, lines 23-25).**

Regarding claim 9, Nevo teaches the method according to claim 7, wherein the received information comprises setup or reconfiguration information, and the first radio access means obtains the gaps based on stored and received data **(The MS receives stored and received time of day information from the TDMA/GSM indicating to the MS that it now needs to reconfigure/synchronize to the CDMA base station, during which the interruption in communication to the 1st/TDMA/GSM base station occurs, Pg. 4, lines 1-7, 12-17 and 30-33 and Pg. 5, lines 1-8).**

Regarding claim 10, Nevo teaches the method according to claim 1, wherein the duration of a time gap and the distance between the common time reference and a time gap are given in the time schedule **(Nevo teaches defining a time gap duration of 20 ms (IS-95 standard) that is taken based on the time of day information that is received by both the TDMA/GSM base station and CDMA BASE STATION and is the common time reference between both the TDMA/GSM base station and CDMA base stations, pg. 4, lines 10-12, 23-25 and 30-33 and Pg. 5, lines 1-8).**

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Regarding claim 11, Nevo teaches the limitations of claim 1, wherein several time gaps being are determined in the time schedule and the distance between each of the time gaps being specified in the time schedule **(The distance between the time gaps is defined according to the IS95 standard and is about 20 ms long, pg. 4, lines 23-25).**

Regarding claims 13 and 14, Nevo teaches the method according to claim 1, wherein the time schedule obtained by the first radio access means is determined in the time format of a first RAT, and the time schedule is translated into the time format of a second RAT by the second radio access means **(The time schedule is determined in the time format of a TDMA/GSM base station, which has its own internal clock source, and this time schedule is translated into the time format of the CDMA base station, which is synchronized to a real time of day, pg. 4, lines 7-17).**

Regarding claim 15, Nevo teaches the method according to claim 1, wherein the time schedule is utilized by the second radio access means to provide cell measurements **(The mobile station is handed over from the 1st base station to the 2nd base station in response to the data from the 2nd mobile station and the 2nd mobile station subsequently takes cell measurements, pg. 6, lines 1-4. The data received includes a time scheduled for the 1st mobile station to be interrupted, pg. 4, lines 18-25).**

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Regarding Claim 16, Nevo teaches an arrangement for synchronizing measurements in a mobile communication apparatus, comprising a first active radio access means, a first transceiver means for communicating with a first communication network, the first transceiver means being adapted to communicate according to a first radio access technology **(The mobile station (MS) communicates with an active TDMA/GSM base station before handover takes place, pg. 4, lines 30-32)**; a second passive radio access means comprising a second transceiver means with a second communication network, the second transceiver means being adapted to communicate according to a second radio access technology **(The mobile station communicates with an active TDMA/GSM base station before a handover to the passive CDMA base station takes place, pg. 4, lines 30-32)**; the arrangement further comprising a time reference generating means for generating a time reference common to the first and the second radio access means **(During the handover, the MS synchronizes from a TDMA/GSM base station to a CDMA base station format by using time of day as a common time reference for synchronizing between both types of base stations, where the MS is handed over from a TDMA/GSM base station to a CDMA base station, the MS receives time of day from the TDMA/GSM base station during which time the CDMA base station is synchronized to a real time of day, this time of the CDMA base station, before the handover takes place, pg. 4, lines 1-4 and 30-33 and pg. 5, lines 1-2 and 7-8)**; a time schedule generating means for obtaining at least one time schedule, time schedule indicating at least one time gap, during which the second radio access means is allowed to be active; and the time

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schedule generating means being adapted to determine the activation time of the schedule based on the common time reference **(The applicant defines the time schedule as the time gap, which is an interrupt, during which the second radio access means is allowed to be active. Nevo teaches transmission of the 1st base station may be interrupted while it synchronizes to the 2nd base station, pg. 4, lines 23-29).**

Regarding claim 17, Nevo teaches the arrangement according to claim 16, wherein the time reference generating means is adapted to generate a common time event (CTE) **(The interrupt is the common time event, and transmission of a 1st base station may be interrupted while synchronization occurs with the 2nd base station, pg. 4, lines 23-29)** and the time reference in response to the CTE in the first and the second radio access means **(The MS requests a handover and this activates a time schedule. This causes an interruption to occur to allow the switch from TDMA/GSM base station to CDMA base station, during which the time of day is received in the TDMA/GSM base station and then synchronized to the CDMA base station, pg. 4, lines 1-4 and 30-33 and pg. 5, lines 1-2 and 7-8).**

Regarding Claim 23, Nevo teaches the arrangement according to claim 16, wherein the time schedule generating means is adapted to obtain the time schedule based on stored information and data received from the first communication network during operation **(In switching from a CDMA base station to a TDMA/GSM base**

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station, the MS is at first in communication with the CDMA base station, and the CDMA base station sends this signal indicating the need for handover to the MS, causing the interruption to occur so that the MS may perform a neighbor scan, pg. 4, lines 18-25).

Regarding claim 24, Nevo teaches the arrangement according to claim 16, wherein the time schedule generating means is adapted to incorporate into the time schedule parameters that identify the duration of the time gap, and the distance between the common time reference and the at least one time gap **(Nevo teaches defining a time gap duration of 20 ms (IS-95 standard) that is taken based on the time of day information that is received by both the TDMA/GSM base station and CDMA BASE STATION and is the common time reference between both the TDMA/GSM base station and CDMA base stations, pg. 4, lines 10-12, 23-25 and 30-33 and Pg. 5, lines 1-8).**

Regarding Claim25, Nevo teaches the arrangement according to claim 16, wherein the time schedule generating means is adapted to incorporate into the time schedule a plurality of time gaps and to specify the distance between each of the plurality of time gaps in the time schedule **(The distance between the time gaps is defined according to the IS95 standard and is about 20 ms long, pg. 4, lines 23-25).**

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Regarding claims 26 and 27, Nevo teaches the arrangement according to claim 16, wherein the time schedule generating means is adapted to determine the time schedule in the time format of the first radio access technology and a processor means of the second radio access means is adapted to translate the time schedule into the time format of the second radio access technology **(The time schedule is determined in the time format of a TDMA/GSM base station, which has its own internal clock source, and this time schedule is translated into the time format of the CDMA base station, which is synchronized to a real time of day, pg. 4, lines 7-17).**

Regarding claim 28, Nevo teaches the arrangement according to claim 16, wherein the second radio access means is adapted to provide cell measurements during the time gaps given in the time schedule, and wherein the first access radio means is adapted to be passive **(The mobile station is handed over from the 1st base station to the 2nd base station in response to the data from the 2nd mobile station and the 2nd mobile station subsequently takes cell measurements, pg. 6, lines 1-4. The data received includes a time scheduled for the 1st mobile station to be interrupted, pg. 4, lines 18-25).**

Regarding claim 30, Nevo teaches the arrangement according to claim 16, wherein the second access technology is GSM (Global System for Mobile Communication) **(The Mobile Station is in communication with a 2nd radio access technology that is GSM during handover, pg. 4, lines 19-21).**

Regarding claim 31, Nevo teaches the arrangement according to claim 16, wherein the first and second radio access means have at least one common radio resource **(A duplexer conveys RF signals via antenna to GSM or CDMA base station, pg. 19-21).**

Regarding claim 32, Nevo teaches the arrangement according to claim 31, wherein the common radio resource is an antenna **(A duplexer conveys RF signals via antenna to GSM or CDMA base station, pg. 19-21).**

Regarding claim 33, Nevo teaches the arrangement according to claim 16, further comprising a mobile terminal operable within the first radio access technology and second radio access technology **(The mobile station is in communication with 2 types of base stations and switches between TDMA/GSM base station and CDMA base station, pg. 18, lines 20-23);** the mobile terminal having digital computer capabilities **(TDMA/GSM base station and CDMA base station are produced as digital data, pg. 19, lines 17-18);** a computer program product embodied on a computer readable memory of the mobile terminal, having software code portions for generating a reference common to the first and the second radio access means **(The processor allows for the IS-95 standard to be implemented, which includes the interruption to allow for the handover to take place, Pg. 20, lines 1-4);** obtaining at least one time schedule, the time schedule indicating a time gap during which the second radio access means is allowed to be active **(The applicant defines the time**

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schedule as the time gap, which is an interrupt, during which the second radio access means is allowed to be active. Nevo teaches transmission of the 1st base station may be interrupted while it synchronizes to the 2nd base station, pg. 4, lines 23-29); and determining an activation time of the time schedule based on the common time reference **(The applicant defines the time schedule as the time gap, which is an interrupt, during which the second radio access means is allowed to be active. Nevo teaches transmission of the 1st base station may be interrupted while it synchronizes to the 2nd base station, pg. 4, lines 23-29).**

Regarding claim 34, Nevo teaches the arrangement according to claim 16, adapted for use in a wireless communication apparatus **(Nevo's invention is specific to wireless telecommunications, pg. 1, lines 5-6).**

Regarding claim 35, Nevo teaches the arrangement according to claim 34; wherein the wireless communication apparatus is one from the group consisting of a mobile radio terminal, a mobile telephone (1), a pager and a communicator **(Nevo's invention is specific to wireless telecommunications, pg. 1, lines 5-6).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 4-6, 12 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevo, in view of Leprieur, et al (**US Patent No. 6,959,201**). From now on, Leprieur, et al, will be referred to as Leprieur.

Regarding claim 4, Nevo teaches the limitations according to claim 2. Nevo fails to teach registering counter values from a first and second counter provided in the first and the second radio access means, respectively, in response to the CTE. Leprieur teaches using a mobile communications device with two types of radio access technologies that performs handover, further comprising registering counter values from a 1st and 2nd counter provided in the 1st and 2nd radio access technology in response to a common time event. **(The common time event is an interruption of transmission by the 1st radio access technology so the handover may be performed. The time shift between the 2 mobile radio modes, which is an interruption in the transmission of 1st radio access technology, is calculated in response to the interruption. Counters that are part of clocks associated with the 1st and 2nd radio**

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modes assist in calculating this time shift. A 1st mobile radio mode M1 associated with UTRAN technology has a 1st counter SFN and a 2nd mobile radio terminal M2 has a 2nd counter T1, T2, etc. pg. 2, paragraph 35). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nevo to include registering counter values in response to the common time event for the purpose of reliability.

Regarding claim 5, Nevo in view of Leprieur teach the limitations of claim 4. Leprieur further teaches a current connection frame number, current slot and current chip as being registered by a first radio access means in response to the CTE. A frame number corresponds to the 1st mobile radio mode and is detected as part of the time shift calculation process. Timeslot counters and chip counters are found in the 1st radio mode. **(pg. 2, paragraphs 19 and 35).**

Regarding claim 6, Nevo in view of Leprieur teach the limitations of claim 4. Leprieur further teaches the current frame number in a GSM multiframe structure and the position within the frame as being registered by the second radio access means in response to the CTE. A frame number corresponds to the 2nd mobile radio mode and is detected as part of the time shift calculation process. **(pg. 2, paragraph 21).**

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Regarding claim 12, Nevo teaches the limitations of claim 1. Nevo does not teach registering counter values from a first and second counter provided in the first and the second radio access means respectively in response to the CTE. Leprieur teaches using a mobile communications device with two types of radio access technologies that performs handover, further comprising registering counter values from a 1st and 2nd counter provided in the 1st and 2nd radio access technology in response to a common time event. The common time event is an interruption of transmission by the 1st radio access technology so the handover may be performed. The time shift between the 2 mobile radio modes, which is an interruption in the transmission of 1st radio access technology, is calculated in response to the interruption. Counters that are part of clocks associated with the 1st and 2nd radio modes assist in calculating this time shift. A 1st mobile radio mode M1 associated with UTRAN technology has a 1st counter SFN and a 2nd mobile radio terminal M2 has a 2nd counter T1, T2, etc. **(pg. 1, paragraphs 13-23 and pg. 2, paragraph 35)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nevo to register counter values from a first and second counter provided in the first and the second radio access means respectively in response to the CTE for the purpose of reliability.

Also regarding claim 12, Nevo does not teach a delay between channel timing and the counter of the first radio access means is taken into account when determining the activation time of the time schedule. Leprieur teaches a time shift must be calculated using a counter located in the 1st radio mode. **(pgs. 1, paragraphs 13-23**

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and pg. 2, paragraph 35). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nevo to use the delay to synchronize the clocks corresponding to the 1st and 2nd radio access means as part of the synchronization process between the 1st and 2nd radio access means.

Regarding Claim 18, Nevo teaches the limitations of claim 17. Nevo does not teach the time reference generating means comprising a first and second counter synchronize mechanism provided in the first and second radio access means, respectively, where one of the counter synchronize mechanisms is adapted to generate an interrupt and wherein the interrupt is the CTE the other counter synchronize mechanism adapted to receive the interrupt. Leprieur teaches using a mobile communications device with two types of radio access technologies that performs handover, further comprising registering counter values from a 1st and 2nd counter provided in the 1st and 2nd radio access technology in response to a common time event. The common time event is an interruption of transmission by the 1st radio access technology so the handover may be performed. The time shift between the 2 mobile radio modes, which is an interruption in the transmission of 1st radio access technology, is calculated in response to the interruption. Counters that are part of clocks associated with the 1st and 2nd radio modes assist in calculating this time shift. A 1st mobile radio mode M1 associated with UTRAN technology has a 1st counter SFN and a 2nd mobile radio terminal M2 has a 2nd counter T1, T2, etc. **(pg. 1, paragraphs 13-23 and pg. 2, paragraph 35).** It would have been obvious to one of ordinary skill in the art at the time

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of the invention to modify the invention of Nevo to register counter values from a first and second counter provided in the first and the second radio access means respectively in response to the CTE for the purpose of synchronizing the 1st and 2nd radio access means in order to assist with the handover process.

Regarding claim 19, Nevo in view of Leprieur teaches the limitations of claim 18. Leprieur further teaches either or both of the counter synchronize mechanisms are adapted to write a bit onto a connection to the other, the bit being the interrupt. Bit counters are used in the clock corresponding to the 2nd radio mode that assist in the synchronization process from the 1st radio mode to the 2nd radio mode. **(pg. 2, paragraph 35).**

Regarding Claim 20, Nevo in view of Leprieur teach the limitations of claim 19. Leprieur further teaches the time reference generating means comprises first and second counter means and first and second counter value register means provided in the first and second radio access means, respectively. Leprieur teaches using a mobile communications device with two types of radio access technologies that performs handover, further comprising registering counter values from a 1st and 2nd counter provided in the 1st and 2nd radio access technology in response to a common time event. **(The common time event is an interruption of transmission by the 1st radio access technology so the handover may be performed. The time shift between the 2 mobile radio modes, which is an interruption in the transmission of 1st radio access technology, is calculated in response to the interruption.**

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Counters that are part of clocks associated with the 1st and 2nd radio modes assist in calculating this time shift. A 1st mobile radio mode M1 associated with UTRAN technology has a 1st counter SFN and a 2nd mobile radio terminal M2 has a 2nd counter T1, T2, etc. pg. 2, paragraph 35).

Regarding Claim 21, Nevo in view of Leprieur teach the arrangement according to claim 20. Leprieur further teaches the counter of the first radio access means, in operation, is adapted to generate current connection frame number, current slot and current chip, which the time reference generating means is adapted to store in the first counter value register means in response to the CTE. A frame number corresponds to the 1st mobile radio mode and is detected as part of the time shift calculation process. Timeslot counters and chip counters are found in the 1st radio mode. **(pg. 2, paragraphs 19 and 35).**

Regarding Claim 22, Nevo in view of Leprieur teach the arrangement according to claim 20. Leprieur further teaches the counter of the second radio access means is adapted to generate the current frame number in GSM multiframe structure and the position within the frame, which the time reference generating means is adapted to store in the second counter value register means in response to the CTE. A frame number corresponds to the 2nd mobile radio mode and is detected as part of the time shift calculation process. **(pg. 2, paragraph 21).**

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6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nevo.

Regarding claim 29, Nevo teaches the arrangement according to claim 16 wherein the first radio access technology is CDMA (**pg. 4, lines 18 through 29**). Nevo fails to teach the arrangement according to claim 16, wherein the first radio access technology is WCDMA. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the mobile radio terminal of Nevo to use WCDMA as a first radio access technology instead of CDMA as a first radio access technology for better customer service.

Response to Arguments

7. Applicant's arguments regarding claims 1-3, 7-11, 13-17, 23-28 and 30-35, filed 9/6/08, have been fully considered but they are not persuasive for the following reasons:

Regarding Nevo not teaching the time synchronization of two Radio Access Terminals (RAT's) are connected to one time synchronization, time of day information is shared by both the TDMA/GSM and CDMA base stations as a common time reference in a handover process (**Pg. 4, lines 32-33 and Pg. 5, lines 1-8**).

Regarding Nevo not teaching a synchronization of the type recited in claim 1 existing between the respective time bases, the base stations both transmit time of day information during the handover process, where the TDMA/GSM base station transmits

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time of day information before the CDMA base station, indicating an offset is taken into account when doing the handover (**Pg. 4, lines 32-33 and Pg. 5, lines 1-8**).

Regarding Nevo not teaching the generation of a Common Time Event (CTE) by a hardware interrupt how the interruption of the MS transceiver is synchronized with the GSM neighbor scan, the signal transmitted by the MS hardware component supports the interruption of its service to a 1st base station, during which time the MS searches for a GSM/TDMA base station as opposed to the CDMA base station during the GSM neighbor scan (**pg. 4, lines 18-25**). More specifically, the point at which the hardware interrupt occurs is indicated by the phrase “...**when it is determined that the unit may be handed over...**”, which is on **pg. 4, line 19**.

Regarding Nevo not disclosing how the time gaps are scheduled, the time gaps are scheduled according to a predetermined standard, the IS95 standard, to allow enough time for the MS to establish communication with the new base station while at the same time not allowing too much delay to occur so the user does not notice the change (**Pg. 4, lines 23-25**).

Regarding Nevo not disclosing a sequence of gaps, the IS-95 standard has parameters that specify a sequence of interruptions occur during the handover (**Pg. 21, lines 7-15, 18 and 26**).

8. Applicant's arguments with respect to claims 4-6, 12 and 18-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANK DONADO whose telephone number is (571) 270-5361. The examiner can normally be reached Monday-Friday, 9:30 am-6 pm, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-270-6361.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-273-8300.

Frank Donado
Art Unit 2617

/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617